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REMARKS

A separate and accompanying paper submits certified copies of the priority Japanese applications.

The specification is amended to delete the small squares on page 21, lines 12-17.

The Examiner inquired as to "one or more organic layers and asked if each or at least one layer must include perylene. The antecedent specification passage is found at the top of page 5. Both the specification and the claims say: "one or more organic...layers...the...layers including, either singly or as a mixture, a perylene...." It is thought that this is clear; however, to adopt the Examiner's suggestion, "at least one" has been used.

The claims have been amended to overcome the remainder of the rejections under 35 USC 112. If the applicants have not corrected all of the '112 issues, please telephone the undersigned attorney who will make any further and reasonably necessary amendments promptly.

As to Shi et al (USP 6,013,383):

The examiner asserted in the Office Action item 4 that:

"EL devices according to Shi et al which utilize perylene compounds containing more than one diarylamino group represented by $-Nar^1Ar^2$ meet the limitations of present claims 1, 3 and 4 because one diarylamino group meets the limitations of the diarylamino group "while diarylamino groups in excess of one meet the limitations of groups with steric hindrance."

Comparative Examples 1 and 2 in the text of the applicants specification proved that second and after second diarylamino groups do not cause steric hindrance in perylene compounds containing more than one diarylamino group.

Therefore, the examiner's rejection is traversed.

As to Toguchi et al (JP 11-185961):

The examiner asserted in the Office Action (item 6) that:

"EL devices comprising one or more of the specific benzoperylene compounds of formula (3)-(6) as shown on pages 9-10 of the prior art are considered by the examiner to anticipate the EL device of the present claims 7 and 10-12 with the expectation that the diarylamino groups of these species meet the limitations of a group with steric hindrance for suppressing aggregation of molecules.

Comparative Examples 1-4 in the text of the present application prove that second and after second diarylamino groups do not cause steric hindrance in perylene compounds containing more than one diarylamino group.

Therefore, the examiner's rejection is traversed.

The examiner's rejection set forth in items 7 and 8 in the Office Action is addressed by the amendments to the claims.

As to Okutsu et al (JP 10-88120):

Okutsu et al teach a General Formula (1) having a broad coverage; however, they do not teach a specific compound having steric hindrance for suppressing an aggregation of molecules. Okutsu et al do not teach that any compounds fall within the compounds in the present invention.

As to Tamano (USP 6,329,084 B1):

Tamano teaches many substituted groups which can be contained in a perylene skeleton or benzoperylene skeleton of perylene or benzoperylene compounds.

However, neither Okutsu et al nor Tamano specifically teach the compounds and their structure which are described in the present application, and more specifically as described in applicants' Comparative Examples and other Examples which are found in the text of the specification.

According to the applicants' invention, a substituted group with steric hindrance is added in perylene compounds containing one diarylamino group or benzoperylene compound for suppressing an aggregation of molecules to obtain an EL device having superior performance as compared with the device using a compound having only a diarylamino group.

Therefore, applicants traverse the examiner's rejection based on Okutsu et al and on double patenting based on Tamano.

As to Xie et al (5,989,737)

The Examiner points out (Page 11, Paper No. 2) that the Xie et al patent does not disclose the invention. Then, she argues that one skilled in the art would expect that compounds having a structure similar to benzoperylene would have similar properties. She further points out that compounds which are structurally generally close have a presumed expectation of similar properties.

In support of this argument the Examiner cites In re Wilder, 195 USPQ 426 (CCPA 1977). It is thought that she is referring in the right hand column of

page 426. At the bottom of the right hand column, the court notes that the court reversed "Wilder I" because the prior art was different. In short, the decision really rests on prior art – not suppositions. Respectfully submitted, there are so many words such as "similar", "expected", etc. in the Wilder decision that it deprives the decision of a broad, all encompassing rule.

On almost every page of Paper No. 2, the Examiner makes this same argument of presumed anticipation by less than adequate prior art. The argument presented here with respect to Xie et al applies to all of these presumptions.

Accordingly, if the Examiner is correct in her "expectations" of "similar properties", it should be easy for her to cite closer prior art which could be easier to rebut.

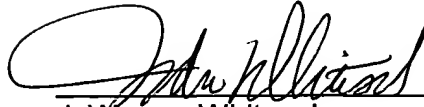
It is thought that the double patenting rejection will be withdrawn. If it is not and if necessary, a terminal disclaimer will be filed.

For the foregoing reasons, it is thought that the application is now in condition for allowance. However, if the Examiner should believe otherwise, she is respectfully requested to telephone the undersigned attorney before issuing a new Office Action. Any reasonably necessary amendments will be made promptly.

Reconsideration and allowance are requested.

Respectfully submitted,

Dated: 9/12/02



J. Warren Whitesel
Registration No. 16830
MICHAEL BEST & FRIEDRICH LLC
ATTORNEYS AT LAW
401 North Michigan Avenue
Chicago, Illinois 60611
Telephone 312-661-2100
Fax 312-661-0029

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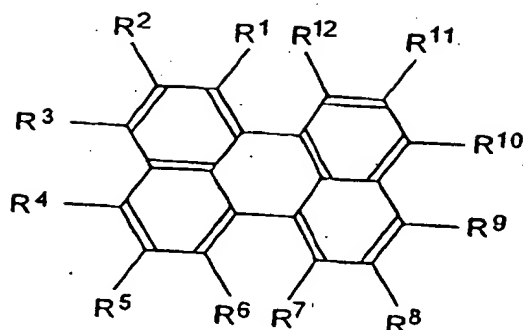
Responsive to an Office Action (Paper No. 2) mailed March 18, 2002,
please amend the application, as follows:

IN THE SPECIFICATION:

Examples of the substituted or non-substituted aralkyl group include benzyl group, 1-phenylethyl group, 2-phenylethyl group, 1-phenylisopropyl group, 2-phenylisopropyl group, phenyl-t-butyl group, [□-] naphthylmethyl group, 1-[□-] naphthylethyl group, 2-[□-] naphthylethyl group, 1-[□-] naphthylisopropyl group, 2-[□-] naphthylisopropyl group, [□-] naphthylmethyl group, 1-[□-] naphthylethyl group, 2-[□-] naphthylmethyl group, 1-[□-] naphthylisopropyl group, 2-[□-] naphthylisopropyl group, 1-pyrrolylmethyl group, 2-(1-pyrrolyl)ethyl group, p-methylbenzyl group, m-methylbenzyl group, o-methylbenzyl group, p-chlorobenzyl group, m-chlorobenzyl group, o-chlorobenzyl group, p-bromobenzyl group, m-bromobenzyl group, o-bromobenzyl group, p-iodobenzyl group, m-iodobenzyl group, o-iodobenzyl group, p-hydroxybenzyl group, m-hydroxybenzyl group, o-hydroxybenzyl group, p-aminobenzyl group, m-

IN THE CLAIMS:

1. (Amended) An organic electroluminescent (EL) device comprising an anode, a cathode, and one or more organic thin-film layers including a light-emitting layer sandwiched between the anode and the cathode, at least one of the organic thin-film layers including a perylene compound represented by a general formula [1] as follows:



[1]

wherein each of R^1 to R^{12} independently represents a hydrogen atom, a halogen atom, hydroxy group, substituted or non-substituted amino group, nitro group, cyano group, substituted or non-substituted alkyl group, substituted or non-substituted alkenyl group, substituted or non-substituted styryl group, substituted or non-substituted cycloalkyl group, substituted or non-substituted alkoxy group, substituted or non-substituted aromatic hydrocarbon group, substituted or non-substituted aromatic heterocyclic group, substituted or non-substituted aralkyl group or substituted or non-substituted aryloxy group; any two of R^1 to R^{12} may form a ring; however, at least one of R^1 to R^{12} is a diarylamino group represented by $-NAr^1Ar^2$ (each of Ar^1 and Ar^2 represents substituted or non-substituted aromatic hydrocarbon group or substituted or non-substituted aromatic heterocyclic group), and at least one of the R^1 to R^{12} other than the diarylamino group is a group with steric hindrance for suppressing aggregation of molecules,

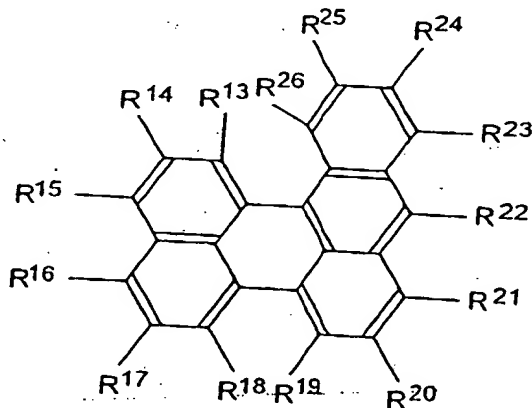
wherein the group with steric hindrance included in the general formula [1] is a substituted or non-substituted alkyl group, [the] a substituted or non-

substituted or non-substituted alkyl group or a substituted or non-substituted aryloxy group.

2. (Amended) The organic EL device as defined in claim 1, wherein at least one of A^1 and A^2 has a substituted or non-substituted styryl group as a substituent.

CANCEL CLAIM 6

7. (Amended) An organic EL device comprising an anode, a cathode, and one or more organic thin-film layers including a light-emitting layer sandwiched between the anode and the cathode, at least one of the organic thin-film layers including[, either singly or as a mixture,] a benzoperylene compound represented by a general formula [2] as follows:



[2]

wherein each of R^{13} to R^{26} independently represents a hydrogen atom, a halogen atom, hydroxyl group, substituted or non-substituted amino group, nitro group, cyano group, substituted or non-substituted alkyl group, substituted or non-substituted alkenyl group, substituted or non-substituted styryl group, substituted

or non-substituted cycloalkyl group, substituted or non-substituted alkoxy group, substituted or non-substituted aromatic hydrocarbon group, substituted or non-substituted aromatic heterocyclic group, substituted or non-substituted aralkyl group or substituted or non-substituted aryloxy group; and two of R^{13} to R^{26} may form a ring; and at least one of R^{13} to R^{26} is a group with steric hindrance for suppressing aggregation of molecules,

wherein the group with steric hindrance included in the general formula [2] is [the] a substituted or non-substituted alkyl group, [the] a substituted or non-substituted cycloalkyl group, [the] a substituted or non-substituted alkoxy group, [the] a substituted or non-substituted aromatic heterocyclic group, [the] a substituted or non-substituted aralkyl group, or [the] a substituted or non-substituted aryloxy group.

CANCEL CLAIM 6

9. (Amended) The organic EL device as defined in claim 8, wherein at least one of Ar^1 and Ar^2 has a substituted or non-substituted styryl group as a substituent.

CANCEL CLAIM 13

REGISTRATION NUMBERS

Charles A. Laff	Reg. No. 19787	Casimir F. Laska	Reg. No. 30,862
J. Warren Whitesel	Reg. No. 16830	Edward R. Lawson Jr.	Reg. No. 41,931
Larry L. Saret	Reg. No. 27674	Craig J. Loest	Reg. No. P-48,557
Martin L. Stern	Reg. No. 28911	Richard H. Marschall	Reg. No. 39,290
Louis Altman	Reg. No. 19373	Thomas A. Miller	Reg. No. 36,871
Barry W. Sufrin	Reg. No. 27398	Kevin P. Moran	Reg. No. 37,193
Marshall W. Sutker	Reg. No. 19995	Thomas J. Otterlee	Reg. No. P-48,652
Kevin C. Trock	Reg. No. 37745	Thomas S. Reynolds II	Reg. No. 45,262
██████████	██████████	Raye L. Shaffer	Reg. No. 47,933
Lisa C. Childs	Reg. No. 39937	Chad W. Shea	Reg. No. P-48,470
Catherine J. Wright-Mitchell	Reg. No. 47,187	David B. Smith	Reg. No. 27,595
David R. Price	Reg. No. 31,557	Derek C. Stettner	Reg. No. 37,945
John C. Bigler	Reg. No. 29,513	Billie Jean Strandt	Reg. No. 36,940
Glenn M. Massina	Reg. No. 40,081	Glen A. Weitzer	Reg. No. P-48,337
Leon Nigohosian, Jr.	Reg. No. 39,791	Sheldon L. Wolfe	Reg. No. 43,996
Donald W. Walk	Reg. No. 29,118	Paul F. Donovan	Reg. No. 39,962
Christopher B. Austin	Reg. No. 41,592	Jill A. Fahrlander	Reg. No. 42,518
David L. De Bruin	Reg. No. 35,489	Grady J. Frenchick	Reg. No. 29,018
Gerald L. Fellows	Reg. No. 36,133	Jeffrey D. Peterson	Reg. No. P-49,038
Joseph A. Gemignani	Reg. No. 19,482	Sara Vinarov	Reg. No. P-48,524
Gregory J. Hartwig	Reg. No. 46,761	Teresa J. Welch	Reg. No. 33,049
Daniel S. Jones	Reg. No. 42,697	Robert S. Beiser	Reg. No. 28,687
Richard L. Kaiser	Reg. No. 46,158	Sean S. Swidler	Reg. No. 49,033
Timothy M. Kelley	Reg. No. 34,201	Robert A. Yesukevich	Reg. No. 36,064
		Perry J. Hoffman	Reg. No. 37,150